

## II. AMENDMENTS TO THE SPECIFICATION

Please accept amendments to the abstract as follows:

[0160] ~~A method, system and program product for building a~~An automated bit-sliced datapath system generating tool is built so design can be performed at a higher level, and automated generation of the synthesizable HDL representation can be accomplished are disclosed. A method defines datapath system characteristics, defines core/pin rules, and then constructs class-type inference rules that can be used for automatically generating the datapath system. An "orthogonal bundling" technique is used that groups pin by a class, and also by a channel identifier. The class-type inference rule corresponding to each class uses of the following factors to infer appropriate wiring: 1) number and type of pins in the class created by the instantiation of cores by the user; 2) attribute definitions on pins set by library core/pin rules; 3) user selection of "global attributes"; 4) user definition of channel bit order ("link orders") to imply the order of connection between stages; and 5) user-defined attributes set on pin classes.